



STATE OF TENNESSEE
DEPARTMENT OF ENVIRONMENT AND CONSERVATION

Division of Remediation - Oak Ridge
761 Emory Valley Road
Oak Ridge, Tennessee 37830

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COUNTY MAYOR'S OFFICE

October 21, 2022

Mr. Roger Petrie
Oak Ridge Office of Environmental Management
U.S. Department of Energy
Post Office Box 2001
Oak Ridge, Tennessee 37831

Dear Mr. Petrie

TDEC Comment Letter Addendum to the Removal Action Work Plan for the Y-12 Facilities Deactivation/Demolition Project, Oak Ridge, Tennessee: Alpha-2 Complex Demolition (DOE/OR/01-2479&D1/A13/R1)

The Tennessee Department of Environment and Conservation (TDEC), Division of Remediation-Oak Ridge Office, received the above referenced submittal on September 21, 2022. The document has been reviewed pursuant to the Federal Facility Agreement (FFA) for the Oak Ridge Reservation. The following comments and concerns remain:

General Comments

1. The current removal action plan includes turning off a sump in the basement of Alpha-2 until the demolition of the facility is complete, which has been estimated to be 18 months. The selected remedy in the UEFPC Phase 1 ROD includes treatment of mercury-contaminated groundwater collected in the Alpha-2 sumps. As the interim goal at Station 17 has not been achieved, collection and treatment of contaminated groundwater must continue pursuant to the terms of the ROD. Under the terms of the ROD, use of the sump cannot be discontinued until the ROD goal is met or the ROD's requirements are modified. While the CERCLA removal authority is recognized as appropriate for decommissioning and decontamination (D&D) of buildings, the scope of the proposed action involved in dealing with the basement sump impinges into the scope of the earlier ROD. Removal authority is designed to complement remedial action, not override it. Therefore, a cessation of treatment of as long as 18 months will require modification of the interim ROD. The procedure under 40 CFR 300.435 for modifications to a ROD should be used either for an Explanation of Significant Differences (ESD) or a ROD amendment for the aspect of proposed action involving cessation of the treatment for the basement sump water which will be caused by the D&D. While removal authority can be utilized, removal authority is not allowed to override features of the remedy already covered by a ROD.

2. There is no discussion on monitoring impacts to groundwater in wells immediately adjacent to the Alpha 2 building prior to, during, or post demolition activities. Demolition activities include cessation of pumping and treatment of contaminated (mercury, volatile organic compounds) groundwater from the Alpha-2 sump. As noted above, ceasing pumping and treatment of contaminated groundwater from the Alpha-2 sump is not permitted under the UEFPC Phase 1 ROD. The mercury modeling results presented by DOE show that groundwater mercury exceedances may result from turning off the pump. A discussion on groundwater and proposed monitoring should be included in this document. Appropriate plans should be developed for both monitoring and protection of groundwater in the area consistent with the current requirements of the ROD.

Specific Comments

1. **Page 1, 3rd paragraph.** Please include references to any RmAWPs (or addendums) that apply to pre-demolition or demolition of Bldg. 9401-1.
2. **Page 4, last paragraph.** This paragraph states that the average mercury concentration detected in the sump effluent ranges from 1000 to 2200 ng/L. Based on information provided by DOE, analytical data is not collected from the sump effluent but rather collected at the influent for the BSWTS which is a combined flow from the Alpha 2 sump and the Big Springs Wet Well. Please confirm if the sample location is only representative of the Alpha 2 sump. If the sample location is representative of both Alpha 2 and the Big Springs Wet Well, please revise the text to state this information.
3. **Page 8, 4th paragraph.** This paragraph discusses that beryllium is a contaminant of concern at Alpha-2. However, the work plan does not discuss how beryllium contamination will be managed during demolition.
4. **Page 8, 4th paragraph.** In response to TDEC General Comment #1 on the A13 document, DOE says that classification concerns for waste being disposed on the ORR will be addressed in the DQA and subsequent WHP for Alpha-2. Classification concerns related to the slab, soils, and subsurface will also need to be addressed during the EU evaluation.
5. **Page 15, Section 4.1.** Please include specific information related to how Bldg. 9401-1 will be demolished and how the associated basement will be managed during demolition.
6. **Page 16, 2nd bullet, 1st sub-bullet.** Please revise to include the depth(s) (feet below ground surface) of the piping/drains that will be excavated following demolition of the building structure.
7. **Page 17, 2nd sub-bullet.** Please include a statement to clarify that these activities will not affect access to the sump.

8. **Page 20, 2nd paragraph.** Several groundwater monitoring wells are located in the immediate vicinity of the Alpha-2 building and, if damaged, can serve as a pathway for contamination. If these monitoring wells are located within the demolition area, please revise this section to include a brief discussion on how these wells will be secured.
9. **Page 20, 3rd paragraph, 1st sentence.** Please identify if monitoring data from NPDES sampling will be evaluated during demolition activities.
10. **Page 20, 4th paragraph.** Please specify that the rain event sampling conducted during demolition will be conducted at the same baseline locations identified in the preceding paragraph.
11. **Page 25, Table 3.** A milestone for submission of the Alpha-2 Waste Handling Plan should be established in Appendix E of the FFA.

The above review of this document meets the review cycle protocol of 30 days. Questions or comments concerning the contents of this letter should be directed to Angel Perkey at the above address or by phone at (865) 220-6559.

Sincerely



Randy C. Young
FFA Project Manager

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